Claims

1. Method for determining the causes of malfunctions and performance limits in an installation (15) with the method comprising the following steps:
- provision of data (51a-i) about causes of malfunctions and performance limits in a larger number of installations (40a-c),
- generation of a questionnaire (26) about these causes from this data,
- collection of responses (27) from employees (29) in the installation under investigation (15) to the questions in the questionnaire (26),
- determination of the causes of malfunctions and performance limits of the installation under investigation (15) by analyzing the responses (27) of the employees (29) to the questions in the questionnaire (26).

2. Method according to claim 1, with data (70, 71) also being supplied about the installation under investigation (15).

3. Method according to claim 1, with
- the data (51a-i) about the causes of malfunctions and performance limits being stored in a first database (21),
- the data (70, 71) about the installation under investigation (15) being stored in a second database (22),
- the questionnaire (26) being generated by a data processing unit (23) from the data in the first (21) and second (22) databases and being output by an output unit (24),
- the responses (27) of the employees (29) being captured via an input unit (27) and stored in the second database (22),
- the causes of malfunctions and performance limits being determined by the data processing unit (23) based on the stored

responses (27) of the employees (29).

4. Method according to claim 1, with data (52a-i) about improvement measures being stored in the first database (21) in addition to the data (51a-i) about the causes of malfunctions and performance limits.

5. Method according to one of the preceding claims, with
- the data (51a-i) about the causes being assigned respectively to installation elements (61 to 67),
- the data (70, 71) in the second database (22) containing details (70) about installation elements (70) occurring in the installation under investigation (15) and
- the questionnaire (26) only containing questions for installation elements occurring in the installation (15).

6. Method according to claim 1, with
- the data (51a-i) about the causes being assigned respectively to target groups (53-55),
- the data (70, 71) about the installation under investigation (15) containing details (71) about the target groups to be questioned,
- the questionnaire (26) being generated such that it only contains questions for employees (29) in the target groups to be questioned.

7. Method according to one of the preceding claims, with the questions in the questionnaire (26) relating to drive and/or automation components of the installation (15).

8. Method according to one of the preceding claims, with the responses (27) of the employees (29) being collected by means

of interviews.

9. Method according to one of claims 1 to 7, with the responses (27) of the employees (29) being collected via a data network (30).

10. Method according to one of the preceding claims, with the data about the causes of malfunctions and performance limits being obtained from malfunction reports (47) and/or field reports (48) from other installations (40a-c).

11. Method according to one of the preceding claims, with the method being implemented by a technical service provider.

12. Method according to one of the preceding claims, with an assessment of the technical state of the installation (15) being made based on the responses (27) of the employees (29) and with the aid of a defined assessment rule (44).

13. Device for determining the causes of malfunctions and performance limits in an installation (15) with
- a first database containing data (51a-i) about causes of malfunctions and performance limits in a plurality of installations (40a-c),
- a second database (22) containing data (70, 71) about the installation under investigation (15),
- an output mechanism (24) to output a questionnaire (26),
- an input mechanism (25) to input responses (27) of employees (29) working in the installation (15) to the questions in the questionnaire (26),
- a data processing unit (23) to generate the questionnaire (26) from the data in the first database (21) and the second database (22) and to determine the causes of malfunctions

and/or performance limits of the installation under investigation (15) by analyzing the responses (27) of the employees (29) to the questions in the questionnaire (26).

14. Device according to claim 13, with data (52a-i) about improvement measures being stored in the first database (21) in addition to the data (51a-i) about the causes of malfunctions and performance limits.

15. Device according to one of claims 13 to 14, with
- the data (51a-i) about the causes being assigned respectively to installation elements (61 to 67),
- the data (70, 71) in the second database (22) containing details (70) about the installation elements occurring in the installation under investigation (15),
- the questionnaire (26) only containing questions for installation elements occurring in the installation (15).

16. Device according to claim 13, with
- the data (51a-i) about the causes being assigned respectively to target groups (53-55),
- the data (70, 71) about the installation to be assessed (15) containing details (71) about the target groups to be questioned,
- the questionnaire (26) being generated such that it only contains questions for employees (29) in the target groups to be questioned.

17. Device according to one of claims 13 to 16, with the output unit (26) and the input unit (25) being able to be connected to the employees (29) via a data communication network (30).

18. Device according to one of claims 13 to 17, with the first database (21) being able to be connected to a plurality of installations (40a-c) via a data network (41).